	Application No.	Applicant(s)
Notice of Allowability	09/943,005	CARPINI ET AL.
	Examiner	Art Unit	
	Salman Ahmed	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Amendment filed on 5/20/2006 and interview with Applicant on 6/14/2006.*

2. ☒ The allowed claim(s) is/are *132, 139-147, 134-138 /47 (Currently 1-15 respectivly).*

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

        Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☒ Other _____ .

DETAILED ACTION

EXAMINER'S AMENDMENT

1.   An examiner's amendment to the record appears below. Should the changes

and/or additions be unacceptable to applicant, an amendment may be filed as provided

by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be

submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview

with Victoria Donnelly on June 14th 2006.

The application has been amended as follows:

The Examiner's amendment to the claims is reflected in the attached "Appendix"

section.

Allowable Subject Matter

2.   Claims 132, 134-147 are allowed.

Conclusion

3.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Salman Ahmed whose telephone number is (571)272-

8307. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit 2616

SA
07/19/2006

HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

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Reply to Office Action of May 03, 2006   A P P E N D I X

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 to 119 (Canceled)
Claim 120-131 (Canceled)

Claim 132 (previously presented):   A   method   of   path   restoration   in   a
communication network having a first switching router and a second switching router, first
and second communication paths extending between said first and second switching
routers, said second communication path including at least one communication path
element different from said first communication path, the method comprising steps of:

creating a first label switched path on said first communication path;

placing one or more data flows within said first label switched path;

creating a second label switched path on said second communication path;

associating said second label switched path with said first label switched path
so as to identify said second label switched path as an alternative path
for said first label switched path;

transferring knowledge of said one or more data flows within said first label
switched path to said second label switched path; and

redirecting data flows destined for said first switched path to said second label switched
path;

wherein said step of creating a second label switched path comprises said step of
associating said second label switched path and further comprises a step of sending a set up
signal to said second switching router, said set up signal having a extra data field
identifying the first label switched path;

wherein the step of transferring knowledge further comprises transferring a soft state of
each said one or more data flows; and

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wherein each said first and second switching routers have an incoming label map for each said first and second label switched paths and the step of transferring knowledge comprises a step of copying entries from the incoming label map of said first label switched path to the incoming label map of said second label switched path.

Claim 133 (Canceled)

Claim 134 (Currently amended): A router for routing data onto a network having a network node and first and second communication paths extending from said router to said network node, said second communication path including at least one communication path element different from said first communication path, said router comprising:

first routing means for routing a first label switched path onto said first communication path;

second routing means for routing a second label switched path onto said second communication path;

set up means for setting up said first and second label switched paths;

associating means for associating said second label switched path with said first label switched path so as to identify said second label switched path as an alternative path for said first label switched path;

transferring means for transferring knowledge of said one or more data flows within said first label switched path to said second label switched path; and

redirecting means for redirecting flows destined for said first switched path to said second label switched path;

wherein said associating means is configured to associate said second label switched path with said first label switched path by sending in a set up signal for said second label switched path, an extra data field identifying said first label switched path;

wherein the transferring means further comprises means for transferring a soft state of each said one or more data flows; and

wherein each said first and second routing means have an incoming label map for each said first and second label switched paths and the transferring means comprises means for copying entries from the incoming label map of said first label switched path to the incoming label map of said second label switched path.

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Claim 135 (Previously presented):   A router as claimed in claim 134, wherein said associating means is configured to use an RSVP signaling method and send the extra data field as an opaque object.

Claim 136 (Previously presented):   A router as claimed in claim 134, wherein said associating means is configured to use a CR-LDP signalling method and send the extra data field as opaque TLV (Type Length Value).

Claim 137 (Previously presented):   A router as claimed in claim 134, wherein said redirecting means is responsive to a change of state of data transmission associated with at least one of said first and second communications paths.

Claim 138 (Previously presented):   A router as claimed in claim 137, wherein said redirecting means is responsive to at least one of a fault or failure in the transmission capability of said first communication path and the density of data transmitted on said first communication path.

Claim 139 (previously presented): A method as claimed in claim 132, wherein said step of redirecting said data flows comprises a single step of switching from said first label switched path to said second label switched path.

Claim 140 (previously presented):   A method as claimed in claim 132, wherein said step of sending a set up signal creating a second label switched path comprises an RSVP signalling method and the data field identifying the first label switched path is sent as an opaque object.

Claim 141 (previously presented):   A method as claimed in claim 132, wherein said step of sending a set up signal creating a second label switched path comprises a CR-LDP signalling method and the data field identifying the first label switched path is sent as an opaque TLV (Type Length Value).

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Claim 142 (previously presented):   A method as claimed in claim 132, wherein the step of creating a second label switched path occurs before the step of placing one or more data flows within said first label switched path.

Claim 143 (previously presented):   A method as claimed in claim 132, wherein the step of creating a second label switched path occurs after said change of state.

Claim 144 (previously presented):   A method as claimed in claim 132, further comprising a step of monitoring a state of data transmission associated with said first and second communications paths and wherein said step of redirecting flows is responsive to a change of state of at least one of said first and second communications paths.

Claim 145 (previously presented):   A method as claimed in claim 144, wherein said step of redirecting flows is responsive to at least one of a fault or failure in the transmission capability of said first communication path and the density of data transmitted on said first communication path.

Claim 146 (previously presented):   A method as claimed in claim 132, wherein said first and second switching routers each have at least one incoming label map containing instructions for incoming data flows, said data flows being represented by corresponding flow labels, and wherein said step of transferring knowledge is performed on a regular basis.

Claim 147 (previously presented):   A method as claimed in claim 132, wherein said step of transferring knowledge is accomplished by said first and second label switched paths sharing an incoming label map.

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